Plan must be reviewed and completed annually.

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| Date Completed *(yyyy-Mon-dd)* |

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# Facility and Vaccine Storage Information

|  |  |  |  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Site Name | | | | | | | | Alberta Vaccine Inventory (AVI) PIN Number *(generated by site contact)* | | | | | |
| Site Address | | | | | | | | | | | | | |
| AHS Zone  South Calgary Central  Edmonton  North | | | | | | | | | | | | | |
| Facility Type Public Health  Physician Office  Acute Care  AHS Pharmacy  LTC  Other *(describe)* | | | | | | | | | | | | | |
| Volume of Vaccine Managed *(Contact your AHS vaccine contact if you are unsure of how your site is classified)*  High  Medium  Low | | | | | | | | | | | | | |
| Site Vaccine Coordinator Name | | | | | | | | | Phone *(daytime)* | | | | |
| Phone *(after hours)* | | | Fax | | | | | | Email | | | | |
| Backup Vaccine Coordinator Name | | | | | | | | | Phone *(daytime)* | | | | |
| Phone *(after hours)* | | | Fax | | | | | | Email | | | | |
| **Other Important Contacts *(if more than 3, attach additional sheet)*** | | | | | | | | | | | | | |
| **Name** | | | | | | | | | Phone *(daytime)* | | | | |
| Fax | | | Email | | | | | | | | | | |
| **Name** | | | | | | | | | Phone *(daytime)* | | | | |
| Fax | | | Email | | | | | | | | | | |
| **Name** | | | | | | | | | Phone *(daytime)* | | | | |
| Fax | | | Email | | | | | | | | | | |
| **Refrigeration** | | | | | | | | | | | | | |
| Refrigerator Type *(check one)*  Laboratory Refrigerator *(mandatory for medium and high volume sites)*  Domestic Refrigerator   * *Must be frost-free* * *Must have separate external door for freezer (when using combination fridge/freezers)* * ***Bar fridges are not acceptable*** | | | | | | | | | | | | | |
| Record Manufacturer and Model Number for each Refrigerator at your facility | | | | | | | | | | | | | |
| Manufacturer | | | Model Number | | | | Service/Repair Provider | | | | | | |
| Name | | | | Phone | | After Hours Contact |
| 1 |  | |  | | | |  | | | |  | |  |
| 2 |  | |  | | | |  | | | |  | |  |
| 3 |  | |  | | | |  | | | |  | |  |
| 4 |  | |  | | | |  | | | |  | |  |
| 5 |  | |  | | | |  | | | |  | |  |
| 6 |  | |  | | | |  | | | |  | |  |
| 7 |  | |  | | | |  | | | |  | |  |
| Backup refrigeration plan *(describe)* | | | | | | | | | | | | | |
| **Temperature Monitoring** | | | | | | | | | | | | | |
| Temperature Alarm Type *(select all that apply)*  Built-in audible alarm  24/7 Monitored Alarm *(mandatory for high volume sites)* | | | | | | | | | | | | | |
| Thermometer/Temperature Monitor Type: *(select all that apply)*  Digital Min/Max *(mandatory for all sites)*  Continuous temperature recording device *(mandatory for medium and high volume sites)*.  Chart Recorder  Data Logger  Other *(specify)* | | | | | | | | | | | | | |
| Record Manufacturer and Model Number for each Thermometer/Temperature Monitor at your facility. | | | | | | | | | | | | | |
| Manufacturer | | | | Model Number | | | Service/Repair Provider | | | | | | |
| Name | | | Phone | | After Hours Contact | |
| 1 | |  | |  | | |  | | |  | |  | |
| 2 | |  | |  | | |  | | |  | |  | |
| 3 | |  | |  | | |  | | |  | |  | |
| 4 | |  | |  | | |  | | |  | |  | |
| 5 | |  | |  | | |  | | |  | |  | |
| 6 | |  | |  | | |  | | |  | |  | |
| 7 | |  | |  | | |  | | |  | |  | |
| **Facility Power Arrangements** | | | | | | | | | | | | | |
| Facility Maintenance Contact *(daytime)* | | | | | | | | | Facility Maintenance Contact *(after hours)* | | | | |
| Electricity Service Provider *(may not be the same as retailer/billing company)* | | | | | | | | | 24-Hour Outage Contact Phone | | | | |
| Circuit Breaker location | | | | | Circuit Breaker Access Instructions *(if applicable)* | | | | | | | | |
| **Facility Power Type** *(select one)*  Large-scale facility with continuous standby back-up power  Facility with back-up power arrangements for vaccine supply *(****must*** *complete back-up power supply field)*  No backup power *(High volume sites* ***must*** *have a written alternate facility agreement kept with this plan)* | | | | | | | | | | | | | |
| **Backup Power Supply *(Not required for large scale facilities or facilities without back up power)*** | | | | | | | | | | | | | |
| Check all that apply  Generator  Other *(describe)* | | | | | | | | | | | | | |
| Generator Manufacturer | | | | | | | | | Generator Model Number | | | | |
| Generator Service/Repair Provider | | | | | | | | | Generator Service/Repair Provider Phone | | | | |
| Other Manufacturer | | | | | | | | | Other Model Number | | | | |
| Other Service/Repair Provider | | | | | | | | | Other Service/Repair Provider Phone | | | | |
| Expected duration of backup power *(hours)* | | | | | | | | | | | | | |
| Is backup power on an automatic switch?  Yes  No - procedures to switch to backup power | | | | | | | | | | | | | |
| **Alternate Facility Arrangements *(must be completed for all facilities)*** | | | | | | | | | | | | | |
| Alternate Facility Name/Address | | | | | | | | | | | | | |
| Facility Contact *(daytime)* | | | | | | Facility Contact *(after hours)* | | | | | | | |
| Access instructions | | | | | | | | | | | | | |
| **Vaccine Packing and Transporting *(must be completed for all facilities)*** | | | | | | | | | | | | | |
| Location(s) of packing and transporting supplies | | | | | | | | | | | | | |
| **Transport Method**  Courier *(Name and contact number)*  Private Vehicle  Other *(describe)* | | | | | | | | | | | | | |

**Equipment Set-Up, Maintenance & Training Checklist**

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| --- |
| **Power Supply**  Vaccine fridge is the only appliance plugged into wall outlet  Unused receptacles are protected by a safety-lock plug or outlet cover  “Do not unplug” sign is posted above wall outlet  Correct circuit breaker switch/fuse is labelled with “Vaccine Fridge” |
| **Power Supply Maintenance**  Backup power tested annually Date of last backup power test  Backup power maintained annually Date of last maintenance service |
| **Refrigerator Location and Set-up**  Room is well-ventilated  Refrigerator is not in direct sunlight  Refrigerator is not located close to a heat source  There is a minimum of 10 cm clearance *(or as recommended by manufacturer)* between back of refrigerator and wall  Motor compartment and vents are not blocked by walls or other equipment  Refrigerator is level  Refrigerator bottom is 2.5 cm to 5.5 cm above floor  Refrigerator is in a secure location away from unauthorized/public access  *“Do Not Adjust Temperature”* sign is posted beside fridge temperature mechanism.  Refrigerator dedicated to storage of vaccines only, with *“Vaccine Use Only”* sign posted on fridge. |
| **Temperature Monitoring Set-Up**  Thermometer/probe located in centre of middle shelf  Probe immersed in liquid glycol (recommended)  Thermometer alarms set at +3.5°C or +3°C (min) and +6.5°C or +7°C (max) for adequate response  time to avoid cold chain break.  Thermometers calibrated within at least ± 1.0°C by the manufacturer  Thermometer inspected annually |
| **Refrigerator Maintenance**  High touch areas (e.g. door handles) and visibly soiled areas cleaned daily  (Guideline: [*Routine Cleaning of Vaccine Storage Equipment)*](http://www.albertahealthservices.ca/info/Page14001.aspx)  Refrigerator compartment, coils and motor cleaned annually  (Guideline:[*Routine Cleaning of Vaccine Storage Equipment)*](http://www.albertahealthservices.ca/info/Page14001.aspx)  Refrigerator maintained annually (at minimum)  [*Vaccine Refrig*](http://www.albertahealthservices.ca/info/Page14001.aspx)*erator Maintenance and Cleaning Log* up-to-date  Location of maintenance log |
| **Packing/Transporting Equipment and Supplies**  Cooler(s)  Frozen Packs  Refrigerated gel packs  Bubble wrap *(or other insulating barrier)*  Paper  Portable temperature monitor(s)  Facility has sufficient packing/transporting supplies to move entire vaccine inventory |
| **Staff Training**  All staff who handle or manage vaccine supplies have completed Vaccine Storage and Handling Training annually  Type of Training  e-Learning  In-service  Training log up-to-date Location of training log |

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# Routine Vaccine Storage and Handling Procedures

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| --- | --- | --- | --- |
| **Task** | **Staff Member(s) Responsible** | **Frequency** | **Notes** |
| Coordinate overall vaccine storage, management, staff training and cold chain contingency response. | Vaccine Coordinator | Ongoing | The designated vaccine coordinators should be fully trained in routine and urgent vaccine storage and handling protocols, and in procedures for managing cold chain breaks. They will be responsible for ensuring that all vaccines and diluents are handled correctly, that procedures are documented, and that all personnel receive appropriate cold chain training. |
| Backup Vaccine Coordinator |
| Monitor internal temperature of the refrigerator storing vaccines | Designated staff member(s) | Twice Daily (or ongoing if 24/7 monitoring) | Refer to: “[*Temperature Monitoring Log*](http://www.albertahealthservices.ca/info/Page14001.aspx)*.*”  Temperatures should always be verified on the first business day after a closure. Always check that refrigerator doors are closed and fit tightly. |
| Maintain temperature logs for a minimum of five (5) years | Designated staff member(s) | Ongoing | Location of temperature logs |
| Order vaccine using the web-based Alberta Vaccine Inventory System | Designated staff member(s) | As needed | Sites should maintain no more than a one month supply of vaccine at any time. Avoid over-ordering or ordering early. Do not stockpile vaccines, as any loss will be more costly in the event of a power outage or refrigerator failure so that the risk of wastage from expired product is increased. |
| Receive, unpack and inspect vaccine shipments | Designated staff member(s)  *(list all names)* | As needed | Refer to “[*Vaccines Packing Checklist*](http://www.albertahealthservices.ca/info/Page14001.aspx)” (Receiving Vaccines). If a cold chain break has occurred, refer to the [*Cold Chain Break Checklists*](#_4._Cold_Chain) below. |
| Conduct routine cleaning and maintenance of vaccine storage equipment | Vaccine Coordinator | Daily  Weekly  Monthly  Quarterly | As per “[*Routine Cleaning of Vaccine Storage Equipment*”](http://www.albertahealthservices.ca/info/Page14001.aspx) guideline and “[*Vaccine Refrigerator Maintenance and Cleaning Log*”](http://www.albertahealthservices.ca/info/Page14001.aspx) |
| Designated staff member(s) |
| Maintain cold chain during transport and clinics | Vaccine Coordinator | As needed | Refer to “[*Vaccine Packing Checklist*”](http://www.albertahealthservices.ca/info/Page14001.aspx) (Packing of Vaccines for the Clinic Setting) |
| Designated staff member(s) |

## 

## Cold Chain Break Checklists

Print & store the [Cold Chain Break Algorithm](http://www.albertahealthservices.ca/assets/info/hp/cdc/if-hp-cdc-ccb-algorithm.pdf) with this plan *(check when complete)*

## 

## Checklist 1: Loss of Power

(✓)

|  |  |
| --- | --- |
|  | If applicable, confirm UPS or Emergency Power is functioning properly, verify the status of backup emergency generators and their fuel source amounts and notify Site Vaccine Coordinator immediately on the status of the systems. |
| **If backup power not available or functioning:** | |
|  | Confirm the vaccine refrigerator is plugged in |
|  | Keep refrigerator door closed until ready to pack and transport vaccine to maintain temperature for as long as possible |
|  | Contact vaccine coordinator and immediately initiate [Checklist 3: Packing of Vaccines for Transport](#_Checklist_3:_Packing) to move vaccines to alternate facility. |
|  | Confirm whether other plugged-in equipment is still working |
|  | Check if power is affected throughout the area/facility |
|  | If problem is specific to vaccine fridge, check fuse/circuit breaker *(or notify facility maintenance)* |
|  | Contact electricity provider to determine if the issue is with the provider or if it is a site issue. |
|  | If the issue does not appear to be loss of power, refer to [Checklist 2: Equipment Failure](#_Checklist_2:_Equipment) |

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## Checklist 2: Equipment Failure

(✓)

|  |  |
| --- | --- |
|  | If available, relocate vaccine supply to alternate refrigeration option and ensure temperature monitoring is maintained. |
|  | If no alternate refrigeration option available, contact vaccine coordinator and immediately initiate [Checklist 3: Packing of Vaccines for Transport](#_Checklist_3:_Packing) to move vaccines to alternate facility. |
|  | Contact Refrigerator Service/Repair Provider |
|  | Retrieve maintenance logs and provide to Service/Repair Provider. |
| Location of Maintenance Logs |

## Checklist 3: Packing of Vaccines for Transport

(✓)

|  |  |
| --- | --- |
|  | Insulated containers must demonstrate the ability to maintain temperature between +2°C to +8°C and must be large enough to store vaccines and packing materials. |
|  | External surfaces must be intact, strong, durable, clean, and the lid tight fitting. |
|  | The container must be clearly identified as containing valuable and fragile vaccines. |
|  | Vaccine should be packed in layers using the following materials: refrigerated and/or frozen packs, insulating barrier (e.g. bubble wrap, crumpled brown packing paper, Styrofoam peanuts), vaccine, a temperature monitor, and filler materials (may be the same as those used as insulating barriers) to prevent shifting of the contents during transport. The number and placement of refrigerated or frozen packs inside the container will depend on container size, outside temperature, and jurisdictional variations in storage and handling materials. |
|  | Frozen ice/gel packs:   * Must be stored in freezer a minimum of 24 hours and completely frozen prior to use. * Use of bagged or loose ice is NOT acceptable. |
|  | Refrigerated gel packs:   * Must be stored between +2°C to +8°C. * Must be stored in refrigerator a minimum of 24 hours prior to use. |
|  | Be sure to place an insulating barrier (e.g. bubble wrap, crumpled brown packing paper, styrofoam peanuts) between the refrigerated or frozen packs and the vaccines to prevent accidental freezing. |
|  | Pack vaccines in their original packaging on top of the barrier. Do not remove vaccine vials from boxes. Be sure to fill any spaces between vaccine boxes with crumpled paper or other filler to prevent shifting of contents in the insulated container. |
|  | Use a properly placed min/max thermometer, data logger, or cold chain monitor near the vaccine. The temperature-monitoring device should be placed in the middle of the vaccines and should not come in contact with the refrigerated or frozen packs. |
|  | Record vaccine type(s), lot numbers, brand names, quantity, date, time and originating facility on a packing slip on the inside of the container. |
|  | Attach labels to the outside of the container to clearly identify the contents as being valuable, fragile, and temperature sensitive biological products that require refrigeration immediately upon shipment arrival. |